

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 7:01 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1105 Const Calendar Day: 678 Date: 13-Apr-2014 Sunday

Inspector Name: Brignano, Bob Title: Transportation Engineer

Inspection Type:

Shift Hours: Break: Over Time:

Federal ID:

Location:

Reviewer: Schmitt, Alex Approved Date: Status: Submit

**04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge****Weather**

Temperature 7 AM

12 PM

4PM

Precipitation

Condition overcast am, clear pm

Working Day ☒ If no, explain:**Diary:**

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

ABF Engineer Kelvin Chen is not at work today.

On site today from VGO is Dave Van Dyke. VGO arrives on site at 0800 and leaves the site about 1200. In the afternoon, VGO produces the evening data reports.

There is no other ABF work today. An ABF Superintendent is supposed to be on site and is apparently present at the Pier 7 warehouse area because of the CCO 314 work, but I do not see him or know which superintendent is on site today. ABF Safety Manager Ed Fuqua is present at the Pier 7 warehouse area because of the CCO 314 work – he is available for any safety issues at the ABF Safety Trailer.

There is no other work by ABF today on site, with work today specifically because of CCO 314. Ironworker Foreman CJ Biskner and Jared Garret start work at 0700 and are done by 1100 and are paid 4 hours. Today is Sunday, so the work is paid at 2.0x OT (DT).

VGO performs reference electrode and pH checks at TR's 12 & 13 approximately 0905 to 0930. CT-METS is notified so that a note about the noise can be made with the AE data. It is noted that the reference electrode stays within 5 mV when compared with the master electrode in the pre- and post-checks. It is also noted that when checking the pH paper with the 7.00 buffer solution, the 4.0-7.0 pH paper and the 6.5-10.0 pH paper both read 6.5.

The tensioning steps are not scheduled to happen until after the morning break (10am break) so that the morning data reports can be produced and evaluated. Meanwhile, the ironworkers have other operations at the test rigs. Prior to the morning tensioning step, there are various cleanup and setup operations performed. First, one ABF 20' k-rail at the fence line between the test rig setup and the parking lot to the east near the CT BayView Trailer is moved to ABF's k-rail stockpile to get it off the daily rental from ABF and away from this area where it is no longer needed. Two 10' ABF k-rail are setup as sawhorses in the area south of the test rigs and 8 of the TR's 1-4 jacking rods (4 used rods and 4 spare rods) are set on the k-rail so they can be examined and cleaned in the future. Note that 3 of these 8 rods already have couplers partially installed on the ends (not fully engaged). Then there is miscellaneous cleanup of the area south of the test rigs, including trashing some items that are no longer needed. The ironworkers take an early morning break so that the tensioning steps can be started and ended earlier today.

Starting after the morning break, the tensioning steps (0.65 Fu) at TR's 12 and 13 happen. Two ironworkers are present to operate the hydraulic pump and turn the nuts. VGO is present to monitor the



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loads being used to guide the operation. Present from CT-METS is Elijah Turner with MISTRAS personnel on the phone line continuously monitoring all AE data on the two channels for each test rig during the jacking operation and the water/air venting. Present from the DJV are Hayat Tazir and Ashley Takata during the jacking operation.

Test Rig #12 (2008 Rod, ID S2-A8, Heat MJF-32, Top) Jacking Step:

This is the 6th jacking step and the rod is being jacked to 0.65 Fu. The post-seating of the nut target is 543.270 +10/-0 kips. The expected hydraulic pressure at this locked off force is 3,200 psi. Based on the previous jacking step (0.60 Fu), the expected seating loss is at least 39 kips, meaning the initial jacking target is ~585-595 kips. Jacking is started at about 1005. At 3,200 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 532 kips. The hydraulic pressure is increased to 3,600 psi and the primary strain gauges give a force of 560 kips. The hydraulic pressure is increased to 3,800 psi and the primary strain gauges give a force of 585 kips. The AE is checked with the ok given at 1008. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 583 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 542 kips (seating loss = 41 kips). The tension in the rod after seating the nut is not within tolerance. For the second jacking step, at 1010, at 3,800+ psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 596 kips. The AE is checked with the ok given at 1012. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 594 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 552.8 kips (seating loss = 41 kips). The force is within the specified tolerance at 1013 – note that it is within 1 kip of the top end of the tolerance range.

Test Rig #13 (2008 Rod, ID S2-A8, Heat MJF-32, Bottom) Jacking Step:

This is the 6th jacking step and the rod is being jacked to 0.65 Fu. The post-seating of the nut target is 543.270 +10/-0 kips. The expected hydraulic pressure at this locked off force is 3,200 psi. Based on the previous jacking step (0.60 Fu), the expected seating loss is at least 41 kips, meaning the initial jacking target is ~585-595 kips. Jacking is started at about 1015. At 3,200 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 539 kips. The hydraulic pressure is increased to 3,500 psi and the primary strain gauges give a force of 562 kips. The hydraulic pressure is increased to 3,600 psi and the primary strain gauges give a force of 575 kips. The hydraulic pressure is increased to 3,700 psi and the primary strain gauges give a force of 594 kips. The AE is checked with the ok given at 1017. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 591 kips (bleed loss = 3 kips). After bleeding off the jacks, the primary strain gauges give a force of 548 kips (seating loss = 43 kips). The force is within the specified tolerance at 1018.

After the tensioning steps at TR's 12 and 13, for the previous load steps, the NaCl Solution flow / air venting steps through the notch in the washers needed to be completed at the wet chambers. This step was done two days ago (after tensioning to 0.60 Fu) and there are no changes to the wet chambers at this dead end, but the DJV has requested that this step be performed every other day regardless. However, the DJV did agree that this step could be skipped if there was an increase in AE activity or when the test steps reach the higher loads. Today, after tensioning to 0.65 Fu, the venting operation was not performed in the interest of safety. In recent days the AE Status has moved from "Low Activity" to "Medium Activity" at TR 13. Some of that activity could be explained by leaks. The AE Status at TR 12 is still at "Low Activity", but the decision is to treat the two test rigs the same. These two test samples are also getting close to the 0.70 Fu level at which the rod broke in the field (both samples from the same rod in the field).

After completing the tension steps, the ironworkers do some cleanup at the test rig site and put away tools. The end of the shift is 1100, for 4 hours at DT on this Sunday.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby at the test rig work area. A 40kW generator – MQ Power 40 – ABF ID 002051 is used to run the hydraulic pump for the jacks for less than an hour. An oxyacetylene torch is on idle/standby at the test rig work area. A compressor – IR P185 ABF ID 000002 is on idle/standby at the test rig work area. An extendable forklift and a Hyster 155 forklift are used for the miscellaneous operations before the tensioning step.

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Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail used on site and paid as rented from ABF on a daily basis. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. The k-rail quantities are as follows:

10' bought k-rail = 20 pieces

10' ABF k-rail = 6 pieces (note, two added to CCO 314 work today)

20' rented k-rail = 10 pieces

20' ABF k-rail = 15 pieces (note, one removed today)

Note that this includes three 20' ABF k-rail between the CCO 314 work area and FW Spencer's yard, with that k-rail being in place prior to the CCO work and not related to CCO 314. Also a fourth 20' ABF k-rail is between the CCO 314 work area and FW Spencer's yard along the fence line near the BayView Trailer.

The agreed extra work with ABF is as follows:

Ironworker Foreman CJ Biskner - 4 hrs DT

Ironworker Jared Garrett - 4 hrs DT

Extendable Forklift - 4 hrs OT

Hyster 155 Forklift - 4 hr OT

40kW Generator - 1 hr OT

k-rail: 10 pcs @20' and 4 pcs @10'

Crane Mats (12x12 - 5'x16') - 4 pcs

Crane Mats (12x12 - 5'x7') - 15 pcs

See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Field and Office 8 hours: Field 0700 through 1100, and office work with some field visits through 1530. ABF is working in the field from 0700 to 1100. I visit the test rigs in the afternoon to check for leaks and rod breaks. In the office I am addressing various CCO 314 issues with the DJV and CT-METS and also reviewing extra work bills due next week. The ABF shift is 0700 to 1100 on CCO 314 operations. My shift and my OT hours are 0700 to 1530.